

ALLOWED CLAIMS

1. (Previously Presented) A circuit device comprising:

a first transistor including a first metal gate electrode over a first gate dielectric on a first area of a semiconductor substrate, the first metal gate electrode comprising a first metal layer in direct contact with the first gate dielectric and having a work function corresponding to the work function of N-type silicon; and

a second transistor complementary to the first transistor including a second metal gate electrode over a second gate dielectric on a second different area of a semiconductor substrate, the second metal gate electrode comprising a second metal layer, the second metal layer having a work function corresponding to the work function of P-type silicon,

wherein the first metal gate electrode and the second metal gate electrode are each separately disposed in respective ones of the first area and the second area of the semiconductor substrate,

the first metal layer and second metal layer comprise the same type of metal, and the first metal gate electrode is tantalum.

2-15. (Canceled)

16. (Previously Presented) The circuit device of claim 1, wherein the first gate dielectric is silicon dioxide.

17. (Canceled)

18. (Previously Presented) A circuit device comprising:

a first transistor including a first gate electrode over a first gate dielectric on a first area of a semiconductor substrate, the first gate electrode comprising a first metal layer in direct contact with the first gate dielectric and having a Fermi level corresponding to a work function of P-type silicon; and

a second transistor complementary to the first transistor including a second gate electrode over a second gate dielectric on a second different area of a semiconductor substrate, the second gate electrode comprising a second metal layer having a Fermi level corresponding to a work function of N-type silicon,

wherein the first gate electrode and the second gate electrode are each separately disposed in respective ones of the first area and the second area of the semiconductor substrate,

the first metal layer and second metal layer are formed from a same initial metal layer, and the first gate electrode is one of tantalum nitride and molybdenum nitride.

19. (Canceled)

20. (Previously Presented) The circuit device of claim 18, wherein the first gate dielectric is silicon dioxide.

21. (Canceled)

22. (Previously Presented) A circuit device comprising:

a first transistor including a tantalum gate electrode directly on a first gate dielectric, the first gate dielectric located on a first area of a semiconductor substrate; and

a second transistor complementary to the first transistor including a tantalum nitride gate electrode directly on a second gate dielectric, the second gate dielectric located on a second area of the semiconductor substrate.

23. (Previously Presented) A circuit device comprising:

a first transistor including a molybdenum silicide gate electrode directly on a first gate dielectric, the first gate dielectric located on a first area of a semiconductor substrate; and

a second transistor complementary to the first transistor including a molybdenum nitride gate electrode directly on a second gate dielectric, the second gate dielectric located on a second area of the semiconductor substrate.

24. (Previously Presented) A circuit device comprising:
a first transistor including a first gate electrode composed of a gate material located directly on a first gate dielectric, the first gate dielectric located on a first area of a semiconductor substrate; and
a second transistor complementary to the first transistor including a second gate electrode composed of a nitride of the gate material located directly on a second gate dielectric, the second gate dielectric located on a second area of the semiconductor substrate.

25. (Previously Presented) The circuit device of claim 24 wherein the gate material is tantalum.

26. (Previously Presented) A circuit device comprising:
a first transistor including a first gate electrode composed of a nitride of a gate material located directly on a first gate dielectric, the first gate dielectric located on a first area of a semiconductor substrate; and
a second transistor complementary to the first transistor including a second gate electrode composed of a silicide of the gate material located directly on a second gate dielectric, the second gate dielectric located on a second area of the semiconductor substrate.

27. (Previously Presented) The circuit device of claim 26, wherein the gate material is molybdenum.